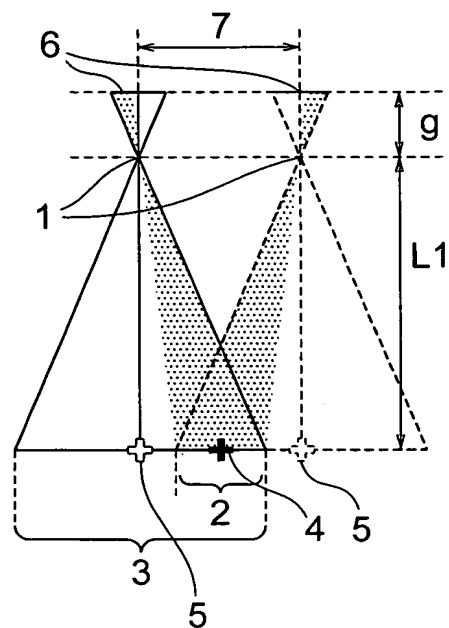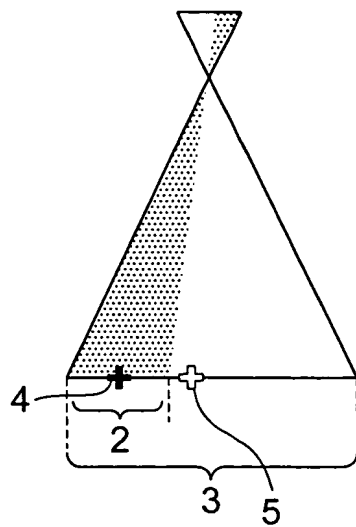FIG. 1A

FIG. 1B

FIG. 1C

FIG. 2A

FIG. 2B

FIG. 3

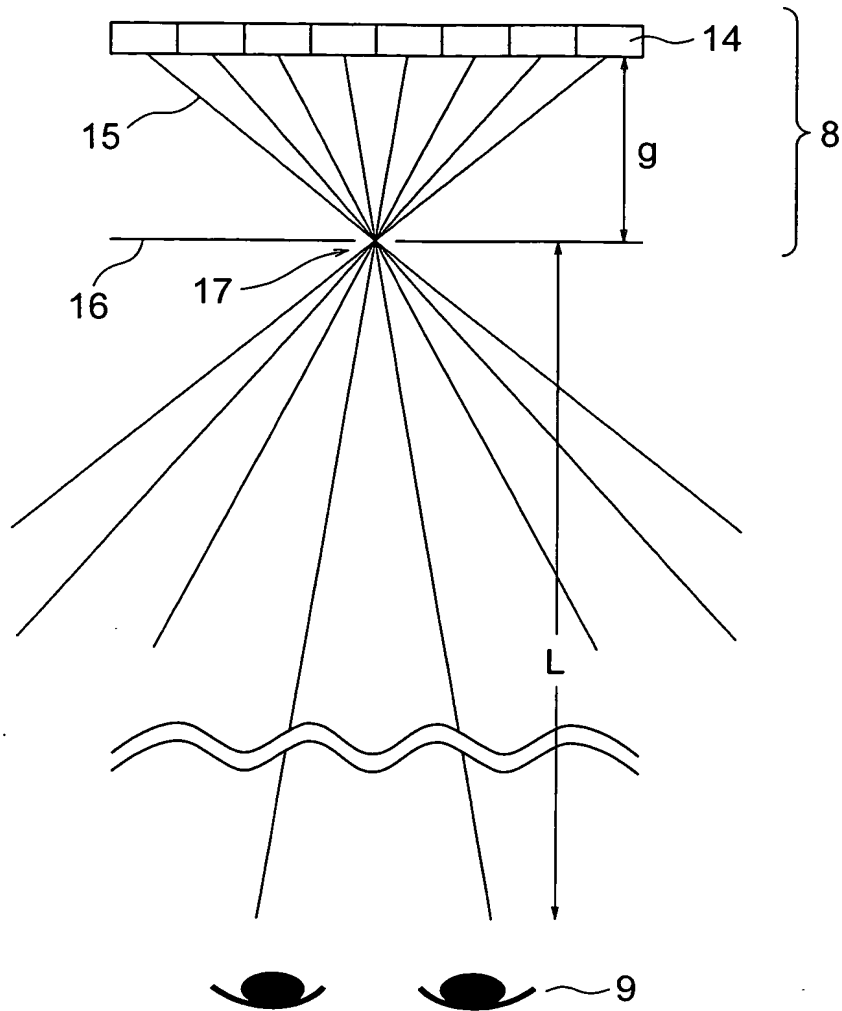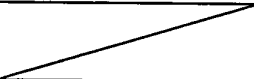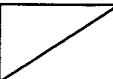|	[mm]		[pixel]		[mm/pixel]	REMARKS
2D DISPLAY PARAMETERS						
D_W_h	WIDTH	D_x_h	HORIZONTAL NUMBER OF PIXELS	D_p_h	HORIZONTAL PIXEL PITCH	
D_W_v	HEIGHT	D_x_v	VERTICAL NUMBER OF PIXELS	D_p_v	VERTICAL PIXEL PITCH	
3D DISPLAY PARAMETERS						
3D_W_h	WIDTH	3D_x_h	HORIZONTAL NUMBER OF PIXELS	3D_p_h	HORIZONTAL PIXEL PITCH	
3D_W_v	HEIGHT	3D_x_v	VERTICAL NUMBER OF PIXELS	3D_p_v	VERTICAL PIXEL PITCH	
REFERENCE PROJECTION PLANE PARAMETERS						
P_W_h	WIDTH	P_x_h	HORIZONTAL NUMBER OF PIXELS	P_p_h	HORIZONTAL PIXEL PITCH	REFERENCE PROJECTION PLANE
P_W_v	HEIGHT	P_x_v	VERTICAL NUMBER OF PIXELS	P_p_v	VERTICAL PIXEL PITCH	REFERENCE PROJECTION PLANE
INDIVIDUAL PROJECTION PLANE PARAMETERS						
P_ray	HORIZONTAL INTERVAL					LIGHT RAY INTERVAL AT L1
S_W_h	WIDTH	S_x_h	HORIZONTAL NUMBER OF PIXELS	Sp_p_h	HORIZONTAL PIXEL PITCH	SHOT IMAGE HORIZONTAL
S_W_v	HEIGHT	S_x_v	VERTICAL NUMBER OF PIXELS	S_p_v	VERTICAL PIXEL PITCH	SHOT IMAGE VERTICAL
Shift_W		Shift_x		Shift_p		SHIFT IN HORIZONTAL COORDINATE BETWEEN INDIVIDUAL PROJECTION PLANES
Shift_all_W		Shift_all_x		Shift_all_p		SHIFT OF INDIVIDUAL PROJECTION PLANE AT OUTERMOST END
Overlap_W		Overlap_x		Overlap_p		OVERLAPPING HORIZONTAL WIDTH BETWEEN INDIVIDUAL PROJECTION PLANES

FIG. 4

ENLARGEMENT AND REDUCTION OF MULTI-VIEWPOINT IMAGE					
Zoom_S		zoom_N		ZOOM (MAGNIFICATION)	

FIG. 5

[mm]		[pixel]		[mm/pixel]	
2D DISPLAY PARAMETERS					
D_W_h	=D_p_h*D_x_h	D_x_h	=DEFAULT	D_p_h	=DEFAULT
D_W_v	=D_p_v*D_x_v	D_x_v	=DEFAULT	D_p_v	=DEFAULT
3D DISPLAY PARAMETERS					
3D_W_h	=D_W_h	3D_x_h	=D_x_h*3/Np	3D_p_h	=3D_W_h/3D_x_h
3D_W_v	=D_W_v	3D_x_v	=DEFAULT	3D_p_v	=3D_W_v/3D_x_v
ENLARGEMENT AND REDUCTION OF MULTI-VIEWPOINT IMAGE					
zoom_S	=DEFAULT	zoom_N	=DEFAULT		
REFERENCE PROJECTION PLANE PARAMETERS					
P_W_h	=D_W_h*zoom_S	P_x_h	=3D_x_h*zoom_N	P_p_h	=P_W_h/P_x_h
P_W_v	=D_W_v*zoom_S	P_x_v	=3D_x_v*zoom_N	P_p_v	=P_W_v/P_x_v
INDIVIDUAL PROJECTION PLANE PARAMETERS					
P_ray	=(D_p_h/3)*L1/g				
S_W_h	=Sp_p_h*S_x_h	S_x_h	=Shift_all_x+ Overlap_x	Sp_p_h	=P_p_v
S_W_v	=S_p_v*S_x_v	S_x_v	=ROUND(2*(L1/ TAN(ϕ)+P_W_v/2) /P_p_v)	S_p_v	=P_p_v
Shift_W	=Shift_p*Shift_x	Shift_x	=ROUND(P_ray_/ P_p_v)	Shift_p	=P_p_v
Shift_all _W	=Shift_all_p*Shift _all_x	Shift_all _x	=Shift_x*(N_need −1)	Shift_all _p	=P_p_v
Overlap_ W	=Overlap_p* Overlap_x	Overlap_ x	=P_x_h*P_p_h/ P_p_v	Overlap_p	=P_p_v

FIG. 6
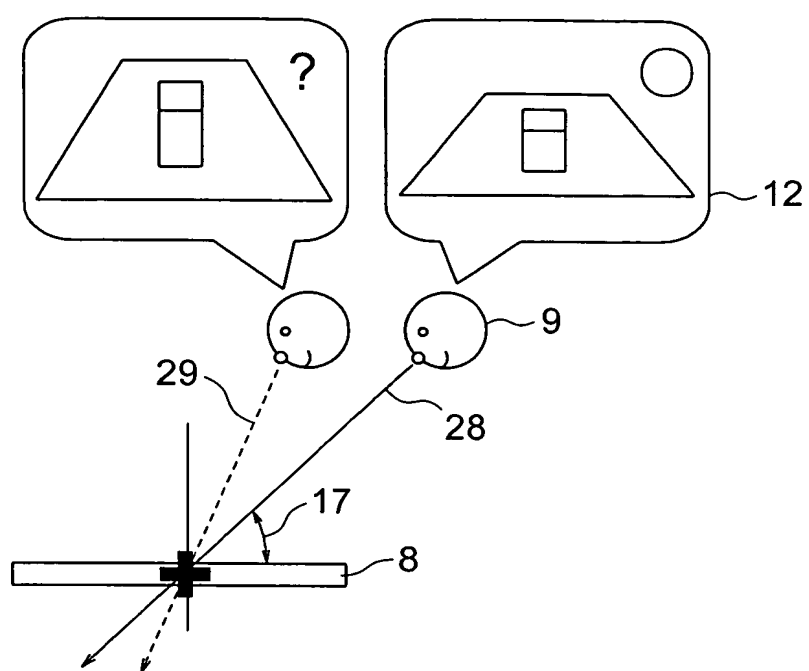
FIG. 7

ϕ [degree]	45	50	55	60	65
b/a	1	0.84	0.70	0.58	0.47

FIG. 8

```
                                    ┌──────────────────────────┐
                                    │   2D DISPLAY PARAMETER    │
                                    └──────────────────────────┘
                                                 │
 ┌──────────────────────────────────┐           │
 │ 3D DISPLAY CONDITIONS: Np, L1, g  │──────────▶│
 └──────────────────────────────────┘           │
                                                 │
 ┌──────────────────────────────────┐           │
 │ 3D DISPLAY PARAMETERS: 3D_x_v     │──────────▶│
 └──────────────────────────────────┘           │
                                                 ▼
                                    ┌──────────────────────────┐
                                    │    3D DISPLAY PARAMETERS  │
                                    │ (3D_x_h, 3D_p_h, 3D_p_v,  │
                                    │   P_W_h, P_x_h), P_ray    │
                                    └──────────────────────────┘
                                                 │
 ┌──────────────────────────────────┐           │
 │ ENLARGEMENT AND REDUCTION         │──────────▶│
 │ OF INDIVIDUAL VIEWPOINT IMAGE     │           │
 └──────────────────────────────────┘           │
                                                 │
        ┌──────────────────────┐                 │
        │   φ (DEPRESSION)      │───────────────▶│
        └──────────────────────┘                 │
                                                 ▼
                                    ┌──────────────────────────┐
                                    │   REFERENCE PROJECTION    │
                                    │     PLANE PARAMETERS      │
                                    │  INDIVIDUAL PROJECTION    │
                                    │     PLANE PARAMETERS      │
                                    └──────────────────────────┘
```
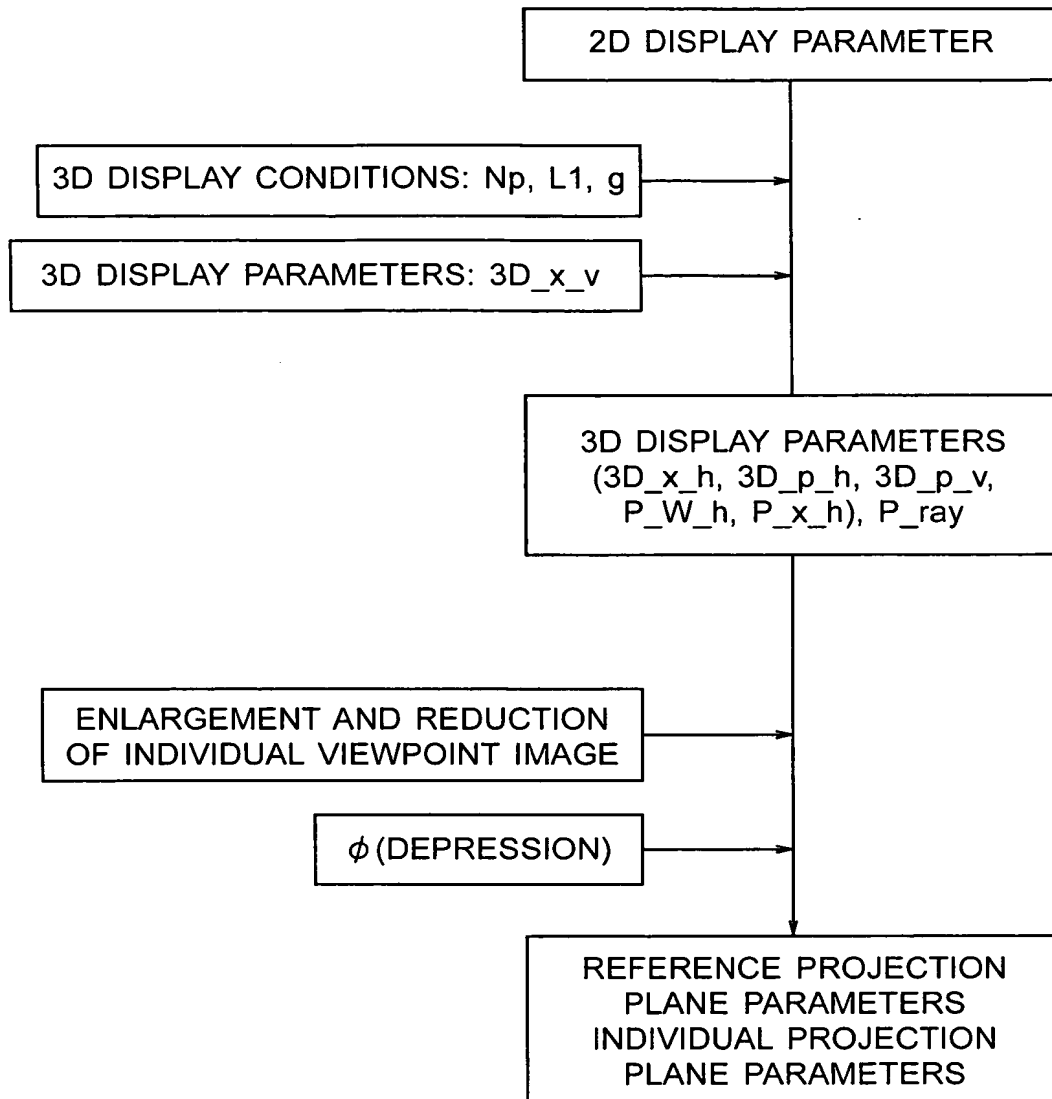
FIG. 9

	[mm]		[pixel]		[mm/pixel]	REMARKS
CAMERA PARAMETERS						
F_W_h	WIDTH	F_x_h	HORIZONTAL NUMBER OF PIXELS	F_p_h	HORIZONTAL PIXEL PITCH	FILM HORIZONTAL
F_W_v	HEIGHT	F_x_v	VERTICAL NUMBER OF PIXELS	F_p_v	VERTICAL PIXEL PITCH	FILM VERTICAL
F	FOCAL LENGTH					DISTANCE BETWEEN FILM AND LENS

FIG. 10

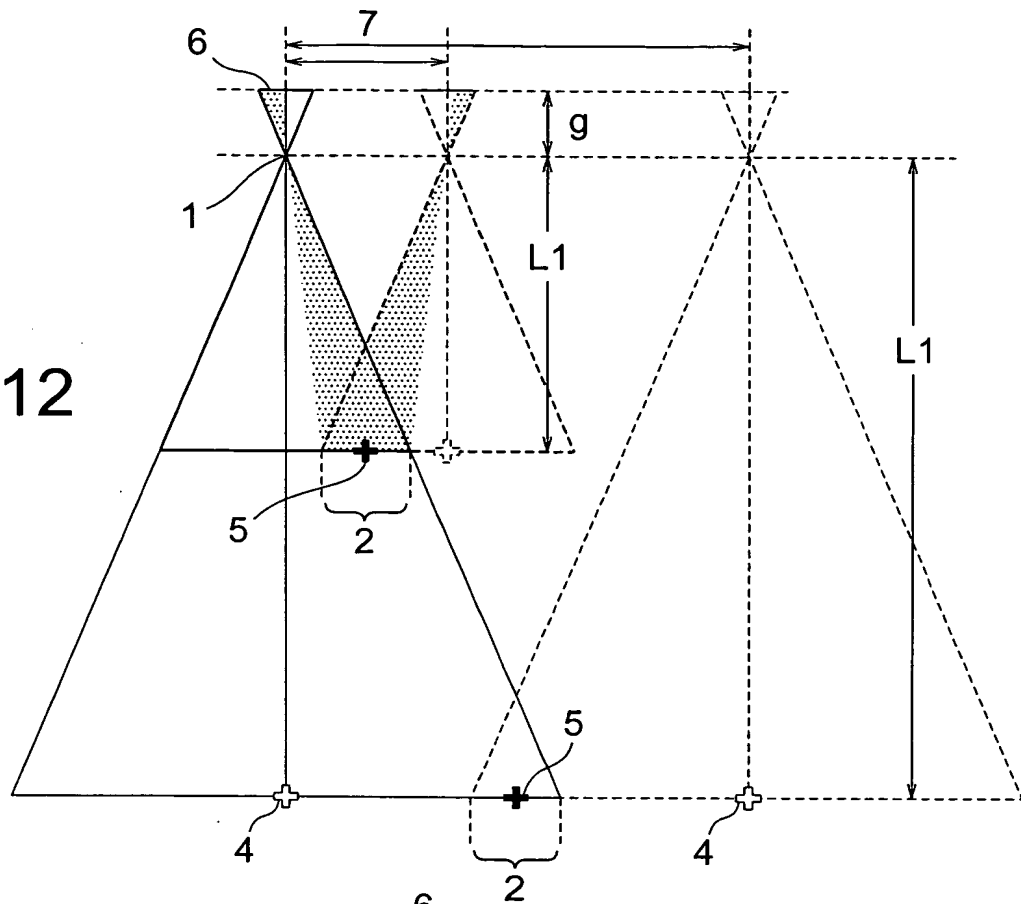|	[mm]		[pixel]		[mm/pixel]
ENLARGEMENT AND REDUCTION OF MULTI-VIEWPOINT IMAGE					
zoom_S	=DEFAULT	zoom_N	=P_x_v/3D_x_v		
REFERENCE PROJECTION PLANE PARAMETERS					
P_W_h	=P_p_h*P_x_h	P_x_h	=ROUND(P_x_v*3D_W_h/3D_W_v)	P_p_h	=F_p_h*L1/f
P_W_v	=3D_W_h*Zoom_S	P_x_v	=ROUND(P_W_v/P_p_v)	P_p_v	=F_p_v*L1/f
INDIVIDUAL PROJECTION PLANE PARAMETERS					
P_ray	=(FD_p_h/3)*L2/g				
S_W_h	=Sp_p_h*S_x_h	S_x_h	=F_x_h	Sp_p_h	=P_p_v
S_W_v	=Fp_p_h*F_x_h	S_x_v	=F_x_v	S_p_v	=P_p_v
Shift_W	=Shift_p*Shift_x	Shift_x	=ROUND(P_W_h/P_p_v)	Shift_p	=P_p_v
Shift_all_W	=Shift_all_p*Shift_all_x	Shift_all_x	=Shift_x*(N_all_result−1)	Shift_all_p	=P_p_v
Overlap_W	=Overlap_p*Overlap_x	Overlap_x	=S_x_h−Shift_all_x	Overlap_p	=P_p_v
CAMERA PARAMETERS					
F_W_h	=F_W_v*F_x_h/F_x_v	F_x_h	=DEFAULT	F_p_h	=F_W_h/F_x_h
F_W_v	=DEFAULT	F_x_v	=DEFAULT	F_p_v	=F_W_v/F_x_v
F	=DEFAULT				

FIG. 11

FIG. 12
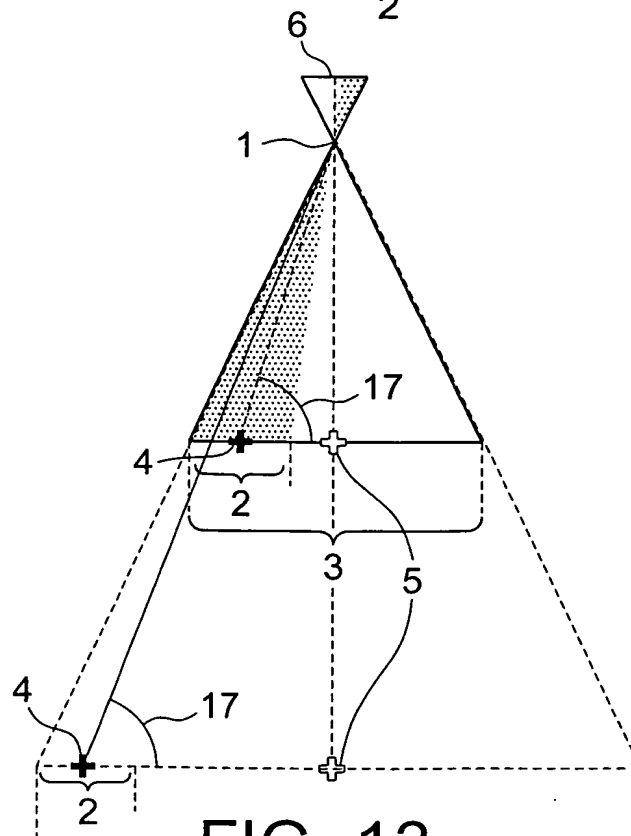
FIG. 13
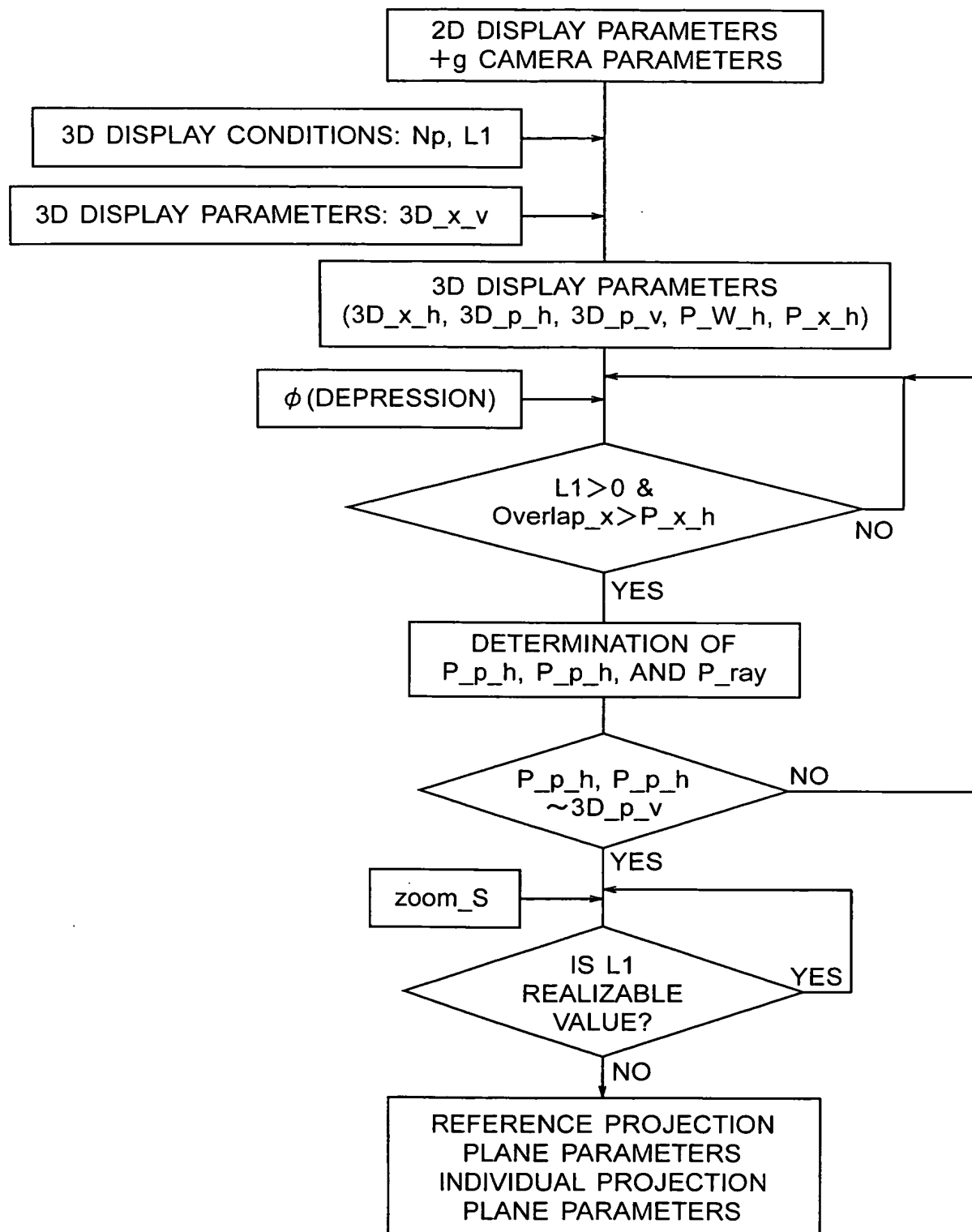
FIG. 14
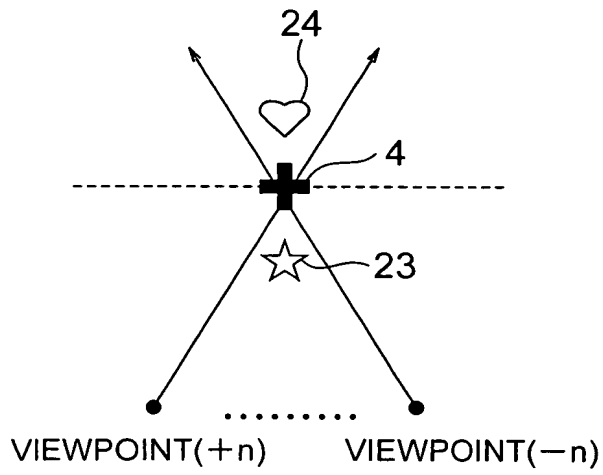
FIG. 15A
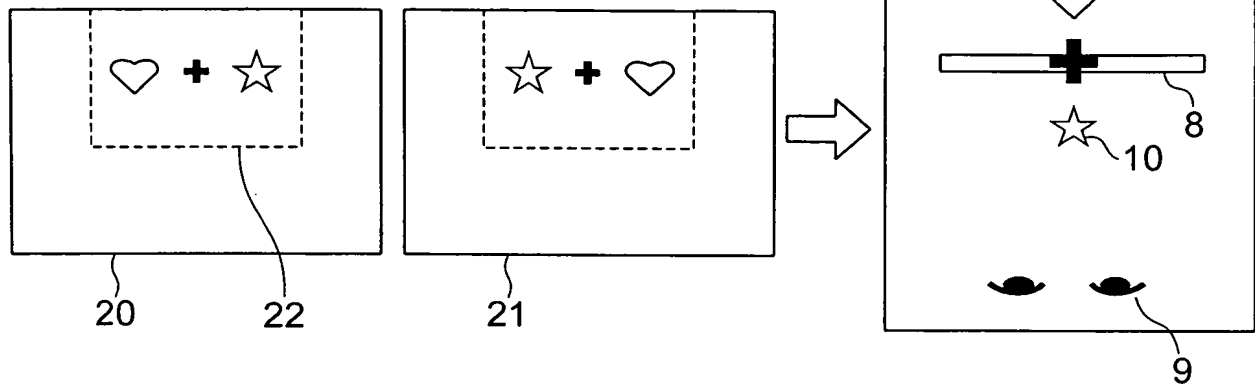
FIG. 15B
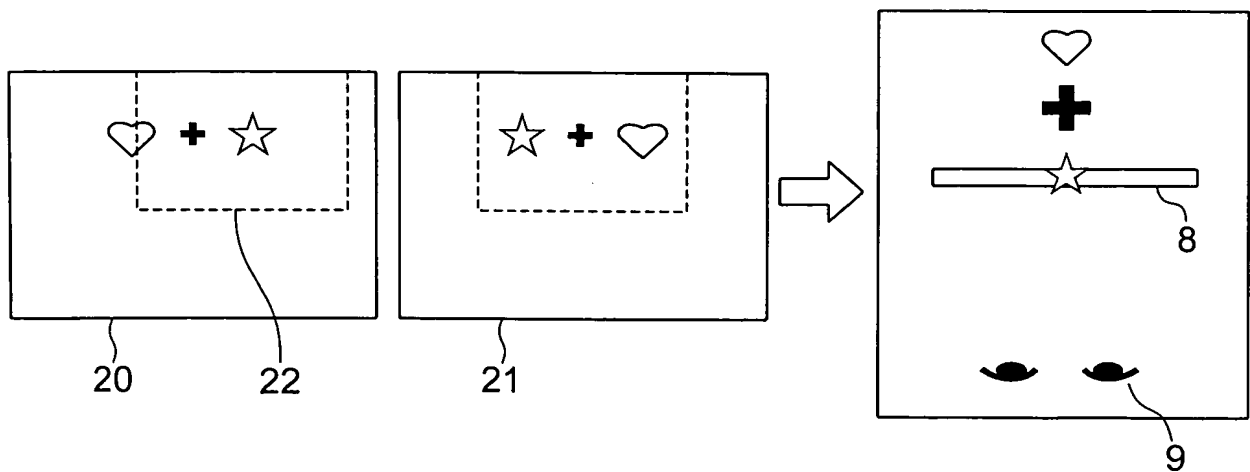
FIG. 15C

	[mm]		[pixel]		[mm/pixel]
2D DISPLAY PARAMETERS					
D_W_h	331.2	D_x_h	1920	D_p_h	0.1725
D_W_v	207	D_x_v	1200	D_p_v	0.1725
3D DISPLAY PARAMETERS					
3D_W_h	331.2	3D_x_h	320	3D_p_h	1.035
3D_W_v	207	3D_x_v	400	3D_p_v	0.5175
ENLARGEMENT AND REDUCTION OF INDIVIDUAL VIEWPOINT IMAGE					
zoom_S	1	zoom_N	1		
REFERENCE PROJECTION PLANE PARAMETERS					
P_W_h	331.2	P_x_h	320	P_p_h	1.035
P_W_v	207	P_x_v	400	P_p_v	0.5175
INDIVIDUAL PROJECTION PLANE PARAMETERS					
P_ray	20.125				
S_W_h	1037.5875	S_x_h	2005	Sp_p_h	0.5175
S_W_v	1187.145	S_x_v	2294	S_p_v	0.5175
Shift_W	20.1825	Shift_x	39	Shift_p	0.5175
Shift_all _W	706.3875	Shift_all _x	1365	Shift_all _p	0.5175
Overlap_ W	331.2	Overlap_ x	640	Overlap_p	0.5175

FIG. 16

	[mm]		[pixel]		[mm/pixel]
2D DISPLAY PARAMETERS					
D_W_h	331.2	D_x_h	1920	D_p_h	0.1725
D_W_v	207	D_x_v	1200	D_p_v	0.1725
3D DISPLAY PARAMETERS					
3D_W_h	331.2	3D_x_h	320	3D_p_h	1.0327577
3D_W_v	207	3D_x_v	400	3D_p_v	0.5175
ENLARGEMENT AND REDUCTION OF INDIVIDUAL VIEWPOINT IMAGE					
zoom_S	1	zoom_N	1.265		
REFERENCE PROJECTION PLANE PARAMETERS					
P_W_h	331.619712	P_x_h	810	P_p_h	0.4094071
P_W_v	207	P_x_v	506	P_p_v	0.4094071
INDIVIDUAL PROJECTION PLANE PARAMETERS					
P_ray	26.4835187				
S_W_h	818.814104	S_x_h	2000	Sp_p_h	0.4094071
S_W_v	1228.22116	S_x_v	3000	S_p_v	0.4094071
Shift_W	26.6114584	Shift_x	65	Shift_p	0.4094071
Shift_all _W	452.394792	Shift_all _x	1105	Shift_all _p	0.4094071
Overlap_ W	366.419311	Overlap_ x	895	Overlap_p	0.4094071
CAMERA PARAMETERS					
F_W_h	16	F_x_h	2000	F_p_h	0.008
F_W_v	24	F_x_v	3000	F_p_v	0.008
F	18				

FIG. 17

	[mm]		[pixel]		[mm/pixel]
2D DISPLAY PARAMETERS					
D_W_h	331.2	D_x_h	1920	D_p_h	0.1725
D_W_v	207	D_x_v	1200	D_p_v	0.1725
3D DISPLAY PARAMETERS					
3D_W_h	331.2	3D_x_h	320	3D_p_h	1.035
3D_W_v	207	3D_x_v	400	3D_p_v	0.5175
P_W_h	1.03795714	P_x_h	18.0514286		
ENLARGEMENT AND REDUCTION OF INDIVIDUAL VIEWPOINT IMAGE					
zoom_S	1	zoom_N	1.015		
REFERENCE PROJECTION PLANE PARAMETERS					
P_W_h	331.023652	P_x_h	650	P_p_h	0.5092672
P_W_v	207	P_x_v	406	P_p_v	0.5092672
INDIVIDUAL PROJECTION PLANE PARAMETERS					
P_ray	32.9432192				
S_W_h	1527.80147	S_x_h	3000	Sp_p_h	0.5092672
S_W_v	1018.53431	S_x_v	2000	S_p_v	0.5092672
Shift_W	33.1023652	Shift_x	65	Shift_p	0.5092672
Shift_all_W	1158.58278	Shift_all_x	2275	Shift_all_p	0.5092672
Overlap_W	369.218689	Overlap_x	725	Overlap_p	0.5092672
CAMERA PARAMETERS					
F_W_h	24	F_x_h	3000	F_p_h	0.008
F_W_v	16	F_x_v	2000	F_p_v	0.008
F	18				

FIG. 18